PUBLISHED AT
RM 7-380
77 MASS AVE
CAMBRIDGE MA
02139

MIT

A VERBAL AND VISUAL FORUM FOR MINDS IN THE DEPT OF ARCHITECTURE

NON-PROFIT ORG.
U.S. POSTAGE
PAID
CAMBRIDGE, MA
PERMIT NO 54016

THRESH

CO-EDITORS
EDWARD EIGEN
JUNE WILLIAMSON

NUMBER 10: MAY 6

MIT and the Other Tradition

Colin St John Wilson

Stair from Ziegler House Hugo Haering, Berlin-Steglitz (1936)

As the rise to power of Hitler provoked the flight from Europe of many architects of high reputation it is to the undying credit of MIT that it picked the non-conformist, the awkward one whose open-minded and irreverent talent challenged the presumed orthodoxy of the 'avant-garde': Alvar Aalto. The decision is made the more significant by contrast with Harvard's selection of Walter Gropius; as a result we are presented with the tantalizing picture in the late 'forties, of the Pope in Harvard Square and Luther in Mass. Avenue hammering a rival edict on his gates[1]

A whole thesis lies folded within that strange conjunction. Setting aside for a moment the brilliant and devastating indictment by Klaus Herdeg[2] of all that Gropius' teaching method stood for and achieved we have in this confrontation an epiphany of that "*trahison des clercs*" which I believe lies at the root of our present discontent.

To give that comparison its historical perspective we have to revisit an earlier confrontation in an other place and between two other protagonists. At the first meeting of CIAM in 1928 at the Chateau of La Sarraz, Hugo Haering challenged the formulation of principles and program for implementation put forward by Le Corbusier. That thesis, couched in the language of Descartes, broke down all complexities of urban structure into "sub-problems" and laid upon them diagrams of geometric splendor compounded from the Cabalistic diagrams of Four Functions, Five Points and Seven Routes. Le Corbusier was a wizard of such alchemy but he would never have got away with such Authoritarian Sublime if it had not suited the hard men with rolled-up sleeves, Mart Stam and Hans Schmidt, Hannes Meyer and André Lurçat: they were getting what they wanted, instruction manuals with clear directives for the field workers.

Haering (who had significantly written an article entitled "The World is not yet quite ready!") challenged what he saw as one pre-judgment after another—ideal geometry, Cartesian co-ordinates, the Five-Point Canon. By contrast he said, "We want to examine things and allow them to discover their own images. It goes against the grain with us to bestow a form upon them from outside." He spoke in vain. The "real politik" of revolution was too impatient, "Dictatorship," it seems, was closing in fast and Haering was silenced. Nevertheless at that moment a sort of Resistance movement was born, not the resistance of an organized movement like CIAM itself but the common pursuit by a number of architects of another tradition born of the English Free School (Butterfield to Lethaby) that had gained fresh blood in the USA (Richardson and Frank Lloyd Wright) returning to Europe to be fostered principally in Germany and thence to be disseminated. The principal protagonists (not forgetting Frank Lloyd Wright himself!) Haering and Hans Scharoun, Alvar Aalto, Erik Bryggmann, Sven Markelius and the later Erik Gunnar Asplund and Sigurd Lewerentz, Lou Kahn and Team 10 produced a continuous body of work that shared a common point of origin in the commitment "to examine things and allow them to discover their own images." The other thing they had in common was that they had nothing to do with that fatuous attempt to derive from the modern movement a "Style." Indeed it is highly significant that when Henry Russell-Hitchcock later reflected upon his own attempt (with Philip Johnson) to do just such a thing with their Exhibition and book *The International Style* he ruefully confessed that had they chosen a date much later than 1932 their whole enterprise would have been brought to question by "the renewal of Frank Lloyd Wright" and "the rise to prominence of Aalto." (He was right to perceive the challenge but still failed to understand its nature because of his persistent attempt to reduce architecture to stylistic criteria with the result that he could only perceive Aalto's work as an example of "Expressionism!")

It is therefore in his role of protagonist of a body of work that of its very nature challenged the common values of CIAM that Aalto could be said to confront Gropius. His sense of the politics of the situation was summed up by his remark, "the architectural revolution, like all revolutions starts with some sort of Dictatorship."

While his status as one of the four masters of "the Heroic Period of the Modern Movement" was beyond question his stance differed in one important respect: for Gropius, Le Corbusier and Mies "the enemy" was the dead hand of the Past whereas for Aalto (10-15 years younger than the others) it was the false claims and bad faith of the Present. He spoke of the obligation to sustain a running battle against "*les deux cochons*"—formalism on the one hand ("the smell of Hollywood") and on the other, the obsession with Technology as a force in itself.

Secondly the timing of his protest was crucial. You do not have to search very hard today to find evidence of what Giancarlo de Carlo has called "the promises that the Modern Movement did not keep." But it was a different matter to have been one of those who spotted the false premise right at the start and raised a protest among the activists right there and then. Aalto did not attend the first meeting of CIAM but he was there at the second meeting a year later at Frankfurt where the theme was the "*Existenzminimum*," a proposition to which he would not assent. Nor did he favor the emphasis upon high-rise residential blocks (3rd

(continued on page 6)

Contents:

MIT AND THE OTHER TRADITION 1
by Colin St John Wilson

KLEINES INTERMEZZO 2
by Mitchell Schwarzer

THE IMMEDIATE FUTURE IS IN THE PAST 3
by Josh Smith

EPISTOLOGRAPHY 4
by Alexander Tzonis

ARS LONGA CAVS BREVIS 5
by Margaret Orth

From the Editors . . .

During the preparation of this issue of Thresholds, the second of a two part series on continuity and change in the Department of Architecture, we regretfully mark the death of a second distinguished architect who formidably shaped the Department's character, Lawrence B. Anderson. It might be said that a whole generation stands between the achievements of Anderson and Pietro Belluschi and the individuals and questions that involve the school today. And it was precisely those of the younger generation—some involved in and others influenced by Team 10's efforts to amend (and ultimately disband) the "elders" of CIAM—that the older generation brought to MIT. They ushered in other sensibilities, and in time developed new dogmas. Despite appearances to the contrary, the decisions now faced by the Department are not spontaneously generated, nor are they attributable to a single agent or cause. We have alternatives to merely looking to the future. The intellectual genealogy of the Department is rich and diverse and it is time to exercise a critical cladism. As a part of looking ahead we must examine both unfinished and abandoned branches of practice that offer fresh opportunities or merely whimsical aporia. As Alexander Tzonis notes in his "Epistolography," the history of the department betrays deep constancy below the appearance of "radical discontinuity." One such tradition is that of the "Other" modernism described in the essay by Colin St John Wilson. The small topographic divide between MIT and GSD belies a larger rift in the modernist edifice, MIT writing the minor part counterpoint to the predominant strains of the CIAM masters. Looking to MIT itself, Mitchell Schwarzer's article "Kleines Intermezzo" forms questions of the building of an architecture education. Walking MIT's endless halls we may wonder "Was ist mit diesem Rätselwort gemeint?" The essay by Josh Smith of the Media Lab looks to the highly contested relationship between architecture and computer technology. He sees in the plans for the "Studio of the Future" vestiges of the past and patterns of recurrence. Finally, Margaret Orth examines the Department's Center for Advanced Visual Studies, a program dedicated to innovation yet currently threatened by change. The articles in this issue which address the past and future of the Department should be read less with an eye to establishing the Department's present, but rather to develop the present moment; that point of connection and resistance that supports architectural edification. Through the techniques of history, theory, and criticism, the moment is calculable and is susceptible to description and specification. This issue is dedicated to the extended moment of MIT's Other Tradition.

Erratum: Of course we meant to write "Whittle Communications" in our last "From the Editors"; we must have been watching too much TV.

Kleines Intermezzo

by Mitchell Schwarzer

2

I am a wanderer and mountain-climber, said he to his heart, I love not the plains, and it seemeth I cannot long sit still[1]

In the spirit of Zarathustra, and having finally escaped from Somerville, I have come to think of theoretical and historical education in architecture as a journey which, in certain hands, may turn building toward unimaginable subtleties and excesses. Admittedly rigorous in its demands for analytical and linguistic prowess, for hours spent away from drawing and models, history and theory risk academic sterility for the promise of a built after-life.

Seductive ambivalence governs the embrace of intellect with building. It colors the mood at 10–390, the graduate student offices of the History, Theory, Criticism section, where desks lie almost precisely under the great central dome of the Institute. Out the window's edge are parts of a courtyard, Bunshaft's green-glass curtain wall on the Compton Laboratories announces the Modern Movement. MIT plays in building the enormous experience of the twentieth century. Yet, inside, amidst shelves lined with the color-coordinated spines of the latest academic press books, architecture surrenders to a medley of quotations. Its forms stir from their foundations, spend nights fugitive. Perhaps as a result, to many students the world of construction and design acquires a sudden heroic character.

Active building is lamented, grudgingly put aside for learned introspection. Like the red wine and steak dinner described by Roland Barthes (and only partially shared at the Sange de Toro-clouded HTC Fora), building seems to promise deliverance from the purely cerebral into the original strength of nature.[2]

5-216 is the think-tank of the HTC program, if only for three hours stretches. Facing another nameless courtyard, and aligned diabolically around pieces of a wooded hexagon, architecture is folded triumphantly into the creases of expressive thought. In the seminar, literary and philosophical phrasing reveal building for unforeseen purposes. Yet, what occurs here is not an elaboration upon architecture but a counterpart to it. The acute consciousness of individual experience merges with a parade of images on the giant screen. Blocking sunlight, those images constitute the multiplicity that architecture seems to now consist of. As Leibniz writes "as the same city regarded from different sides appears entirely different, and is as multiplied perspectively; so it also happens that, because of the infinite multitude of simple substances, there are as it were so many different universes."[3]

Frequent visits to 3-305 accentuate that moment in architecture when dreams of building dissolve into dissertations and the geography of the fine becomes that of conception. Discussions of the dissertation at the professors' offices embodies the process of transforming the latent thoughts of a lifetime into scholarship. At first, the hopes that the dissertation somehow carry on the interests of waking life are concealed by requirements, criticisms, and grant applications. Yet, surrounded by books and a table surface forever obscured by theses and desk copies, the sublime expanses of this sea-crossing are unshuffled. Dissertation becomes as real as life itself, or, as Freud put it: "The fact that dreams are distorted and mutilated by memory is accepted by us but in our opinion constitutes no obstacle, for it is no more than the last and manifest portion of a distorting activity which has been in operation from the very start of the dream's formation."[4]

Architectural historians and theorists are not content to limit their adventures to the haunts of HTC. Down the infinite corridor and across a great divide are the studios, looking sometimes austere and other times an obscenity of matter not too far removed from the glass cases of technological remains that line the dark corridor itself. The studio makes it clear how different HTC is to design. At first, the studio promotes as rich a set of questions as any theory seminar. Both resemble an essay, the first chapter of a novel, or the opening scene of a film: the setting of place and depiction of character. Yet, at final reviews, the studio undergoes a conversion of will. Critical thought turns against itself. Design takes the role of the eternal present, dashing toward finished form and originality. As Eliot relays the battle:

And all is always now. Words strain,
Crack and sometimes break, under the burden,
Under the tension, slip, slide, perish,
Decay with imprecision, will not stay in place,
Will not stay still. Shrieking voices
Scolding, mocking, or merely chattering,
Always assail them. The word in the desert
Is most attacked by voices of temptation . . .[5]

In nearby 3-133, the divergent mentalities of text and building meet on a different field, lectures framed by time-worn orange curtains. Professors have the relative luxury of ninety minutes to prove to the design student that intricate patterns of historically-developed thought and form underlie the contemporary practice of architecture and their own design awareness. History and theory act as hermeneutic thrusts through the mind of the student into any number of possible universes. Drowned by the elegance of the professorial utterance, the student as builder confronts their self-identity. Robert Musil tells it best: "Ulrich assumed as a matter of course that a man who has intellect possesses every kind of it, which would indicate that intellect is pre-existent to qualities, he himself was a man of many contraries and took the view that all the qualities that had ever become manifest in humanity were latent, fairly close to each other, in every man's mind if he had any mind at all."[6]

Alongside Massachusetts Avenue, where monumental power originates at the colonnaded portico announcing Lobby Seven only to dissipate in parking lots and cinder blocks along the walk to Central Square, is Rotch library. A great open reading room with stacks of eagerly awaited journals is the first course to a meal consumed in alcoves marked N, NA, NX, and for some, B. These meals, HTC students hope, will bring about sustenance. They are the substance of life beyond building. As the young Werther notes "My adventure has begun, perfectly according to my wishes, even beyond them. But still I am not sure whether I should be delighted or condemned."[7] ■

1 Friedrich Nietzsche, Thus Spoke Zarathustra, trans. Thomas Common (New York: The Modern Library, n.d.), p. 61.
2 Roland Barthes, Mythologies, trans. Annette Lavers (London: Jonathan Cape, 1972), pp. 29–31.
3 Leibniz, The Philosophical Works of Leibniz, trans. & ed. George Martin Duncan (New Haven: Tuttle Morehouse, & Taylor, 1908), p. 317.
4 Sigmund Freud, The Interpretation of Dreams, trans. James Strachey (New York: Avon, 1965), p. 629.
5 T.S. Eliot, "Burnt Norton," in Collected Poems, 1909–1962 (New York: Harcourt, Brace & World, 1963), p. 180.
6 Robert Musil, The Man Without Qualities, trans. Eithne Wilkens & Ernst Kaiser (New York: Capricorn, 1965), p. 134.
7 Johann Wolfgang Goethe, Die Leiden des jugen Werthers (Leipzig: Insel, 1921), pp. 140–141.

Van de Graaff Generator Building, MIT (1948)

In Memoriam, Lawrence B. Anderson 1906-1994

Lawrence B. Anderson, noted educator and dean of MIT's School of Architecture and Planning from 1965-1972, died on April 6 in Concord, Massachusetts. He was 87.

Anderson, known as "Andy," had been a member of MIT's faculty since 1933, after earning his master's degree here in 1930 and receiving the Paris Prize. In 1940 he and Herbert Beckwith, his partner of many years, designed the Alumni Swimming Pool at MIT; he helped to introduce modernism to the United States and to MIT, which had been largely under the influence of the École de Beaux-Arts. Even though Anderson had studied under the auspices of the École in Paris, he returned to this country with a transformed sensibility that was to guide the transition of MIT from "stripped classicism" to the alternate tradition of modernism described by Stanford Anderson in *Thresholds 9* and by Colin St John Wilson in this issue. Other buildings on the MIT campus designed by Anderson and Beckwith include the Van de Graaff Generator Building and the Pierce Boathouse. Anderson's architecture is distinguished by modest, carefully articulated volumes, scaled-down re-use of industrial forms and materials, and attention to natural light.

While head of the department of architecture from 1947 until he became dean in 1965, he presided over the appointment of numerous innovative faculty members, including György Kepes, Henry Russell-Hitchcock, Robert Woods Kennedy, Carl Koch, and Ralph Rapson and initiated a period of exchange with the Danish Academy of Fine Arts, bringing Kay Fisker and Steen Eiler Rasmussen to MIT.

While Anderson was known mostly as a thoughtful and effective academic, he was also involved in the development of Boston during a period of intense urban renewal, serving as an advisor to the Boston Government Center Commission and managing the Boston City Hall Competition, won by recent Harvard graduates Kallman and McKinnell. The resulting spatially complex structure and its large windswept plaza remain highly controversial, though the presence is welcome in a city so dominated by tradition.

Under his leadership the school's curriculum was expanded to include the latest in technological research such as solar heating, mobile housing, the application of plastics in construction, studies of illumination, and acoustics. —J.W.

The Immediate Future is in the Past

by Josh Smith

It is well known that the Department of Architecture and the Media Lab share a common history, the Media Lab having begun life as a group within the Department. If the fall issue of the School of Architecture's publication *Plan* is a reliable indicator, they share a common future as well—even as the Media Lab is poised to leave the School of Architecture. *Plan* contains a breathless preview of the "Studio of the Future," Dean William Mitchell's scheme to reinvent architectural education at MIT. By reviewing, first, the Media Lab's origin in the Department of Architecture and then the history of the futuristic images offered by Mitchell's proposal, the Studio of the Future will be read as a case study in the compulsion to repeat.

In 1970, Nicholas Negroponte, then a professor in MIT's Architecture Department, published *The Architecture Machine*, a meditation on humans, machines, and the conditions for the possibility of fruitful collaboration between them. Yet the Architecture Machine was not conceived simply as a CAD system. Of this reductive view of the overlap between computers and architecture Negroponte wrote "many computer aided design studies are relevant only insofar as they present more fashionable and faster ways of doing what designers already do. And since what designers already do does not seem to work, we will get inbred methods of work that will make bad architecture, unresponsive architecture, even more prolific." The experiments Negroponte describes are efforts to divine an ideal form, the Architecture Machine, from the faint shadows it cast in the cave of late '60s computing technology. One might object that the search for this metaphysical object is hardly the domain of architecture, and it is therefore not surprising that Negroponte left the Department, founded the Media Lab, and began marketing the Architecture Machine to corporate America under a variety of labels and advertising slogans.

More than twenty years later, William Mitchell also wants a piece of the Architecture Machine action, and who can blame him? Computers have become eminently slicker and therefore more salable, but in fact we are no closer to the final Architecture Machine today than we were with the clunky equipment of the '60s. The rhetoric of the future remains central to both Negroponte's and Mitchell's marketing strategies, a rhetoric in which the future bears the same relationship to the present that the Architecture Machine bears to the computers of today. This type of futurology is a case of the modernist thematics of transcendence, which posits a radical, utopian rupture between the future and the present which is ubiquitous in commercial, architectural, and design discourse since the American 1930s and '40s.

"Sit-down Shopping? Could be!" proclaimed a 1943 Du Pont advertisement. It is probably unnecessary to point out the parallels between, on the one hand, Mitchell's vision of the Studio of the Future, or the Living Room of the Future (his collaboration with Assistant Professor Michael Hawley of the Media Lab and LCS), or Television of Tomorrow (another apparently utopian Media Lab project), and, on the other, the post-war Kitchen of Tomorrow, or George Fred Keck's House of Tomorrow, or the Floor of the Future (it turned out to be linoleum). It is unclear whether these deja vus belie or affirm the epigram of Yesterday's Tomorrows: Past Visions of the American Future: "The future isn't what it used to be."

What happened to the future? Why is the same old techno-utopian rhetoric being microwaved and re-served like the Meatloaf of Yesterday? Though the fantasy objects have shifted from rockets and hovercars to computers and information networks, why does it so often seem to be the case that the future (as demonstrated at MIT in the 1990s) is exactly what it used to be in the 1940s, '50s, and '60s? The "Gernsback Continuum," a story by William Gibson notable for its break with the techno-utopian tradition that had dominated science fiction since the 1930s, may suggest an answer. The story's protagonist is a 1980s photographer commissioned to take pictures for a book called *American Streamlined Moderne*. As he becomes engrossed in the subject his reality begins to merge with the 1980s as imagined in the 1940s; while driving on an Los Angeles freeway he sees Norman Bel Geddes's "Flying Wing," a behemoth of an aircraft that featured squash courts and a ballroom, and hears jazz emanating from within it. Explaining why designers of this period fantasized about such impossibly large airborne luxury, Gibson writes "the designers were populists, you see, they were trying to give the public what it wanted. What the public wanted was the future."

The public still wants the future, though it may not always realize this. Hence the AT&T ads of today, another welcome contribution to the overdetermined discourse of futurology: "Have you ever sent a fax from the beach? You will." Here future wishes bleed ominously into imperative demands, and one wonders how AT&T intends to make this prediction come true. By now it may be clear what happened to the future: it was sold, and resold, and it will apparently continue to sell, whether the seller is corporate America or Academia.

But aside from its perennial marketability, there is another reason this bright gleaming future continues to be available for recycling or (even better) re-use: these breathlessly utopian predictions, whether accompanied by images of a blond-haired Uber-family in white Togas and Lucite sandals (then) or by images of women of color "integrated into an increasingly seamless work environment" (now), have a way of failing to materialize.

Here is one prediction from *Plan* whose realization I believe is likely to be deferred, probably forever: "All the traditional studio rituals will be conducted on-line—the desk crit, the building of models, the consulting of visual references, analysts and consultants, the charrette, the pin-up, the jury." We are still in the early, brash period of the digital telecommunications revolution, analogous to the so-called Golden Age of Artificial Intelligence (AI), when checkers playing and symbolic mathematics had been mechanized, and language, vision, and thought seemed to be just around the corner. That was a time before the fall from grace represented by the frame problem, the symbol-grounding problem, and the other technical terms that have been coined to explain AI's failure to deliver on its early promises. The big, early wins of the digital revolution such as e-mail and the cash machine (that Mitchell has rightly highlighted and adeptly theorized) have led, perhaps understandably, to predictions about our ability to manufacture electronic presence that smack of hubris and the quaint futurology of the recent past.

While I share Mitchell's enthusiasm for these "early wins," and believe that architects should play a more active role in shaping the spaces and social agendas that constitute our emerging electronic polis, I am skeptical of the "strong telepresence" implicit in the *Plan* proposal to conduct "traditional studio rituals" in civilized on-line fashion. (The term polis should suggest democracy for some and disenfranchisement for most, and that should be contrasted to his more optimistic "electronic agora.") Strong telepresence is the claim that all significant or potentially significant aspects of interpersonal interaction can be decomposed functionally and then reproduced electronically. It represents, therefore, a functionalist view of interaction.

Strong telepresence shares its functionalist premise with traditional AI and other discourse of virtuality. The Studio of the Future preview borrows aspects of these discourses in its use of terms such as "virtual conferences" and "virtual studio." A virtual system is an electronic version of a real system, or rather, a collection of its attributes that the designer/simulator deems essential to the real system. Though a virtual entity x is not identical to a real x, it is an effective (or virtual) one because it has all the relevant properties of an x, and only lacks irrelevant ones. It has all the functionality of x. A functionalist recipe for creating a virtual x: identify the elements of system x; describe all relevant functional relationships between them; implement these functional relationships in a computer program. The problem with functionalism is the impossibility of a closed and final specification of all possible functional interactions.

For example, suppose I were to make a virtual version of a simple pocket calculator. I might specify in advance the functions that the calculator should perform (addition, subtraction, multiplication, and division, say). Suppose I implement this description in a computer program and create an electronic version of my pocket calculator up on the computer screen. It does what a calculator should do. But then the context shifts . . . a wind starts blowing . . . and suddenly the weight of the material version becomes very important . . . it can

(*continued on page 6*)

Barry Zevin, *Building 5 Studio Mezzanines*, MIT (1981)

From: wjm@MIT.EDU
To: jdcarr@MIT.EDU
Re: Mezz. bldg. 5 rip-out . . .

The virtual agora does work.

I remember when the student mezzanines and building 5 interior spaces were built—something like 25 years ago as I recall. The students and young faculty who did it replaced something of strong architectural character that was already there, and were rightly impatient with nostalgia for architectural fashions from decades in the past. We're at that point again; the sixties are long gone . . . It's time to photograph the remnants of the old place lovingly, write up its history as part of the ongoing process of evolution and change of the school, and move on. -Bill Mitchell

EPISTOLOGRAPHY

Delft, April 1994

Dear Ed,

It was a pleasure to see you in Cambridge and discuss briefly my contribution to Thresholds *concerning the past of MIT's Department of Architecture. In response to your request I have decided to fuse my cover letter with my article, casting it in the form of an epistle. In doing so I realize I am explicitly giving a certain character to my participation.*

There is much that labeling a text can communicate in terms of presuppositions and implications which would have taken too long to put down explicitly. Writers of previous generations were conscious of this when picking one of the genres in which to express their ideas. Recently the great historian Philippe Aries devoted his introduction to explain why he chose the title Essai de Memoire *as opposed to history, chronicle, or essay for his most recent book.*

A letter permits great informality. It is provisional as well as personal. A letter also allows this writer to set apart this present text from his more formal writing agenda. It also distinguishes it from systematic studies which might exist on design education in the United States. (Robert Steen announced at a certain moment that he was writing about the Yale School of Architecture and there is a draft of the history of the GSD by Anthony Alofsin. But nothing has been announced for the moment publicly that these projects are being materialized.)

Histories of schools of architecture fall between institutional history and history of ideas. As studies of this kind concerning the topics of science, engineering, business, and defense have shown, they are of great significance. Not so much because they peepetuate a so-to-speak memoria martyris, but for their influence in decisions concerning the future.

Certainly, the idea to use history as a guide for the future is very old. The way it is applied today, however, is new. Originally historical texts were aimed at preserving from extinction "great actions" or virtues, as Aries remarks. Today we are more concerned about the constraints, the longue durée impact of cognitive frames on the limits and the potential of individuals, groups or societies as they evolve.

Please do not consider this letter as any more than an invitation for such an endeavor.

My perception of MIT has always been colored by the fact that I was an outsider of MIT and a member of the faculty of the Graduate School of Design (GSD) from 1967 to 1982. As a result I can probably be, on one hand, relatively objective in my observations, while retaining the bias of a comparativist.

My first visit to MIT as a teacher was arranged in 1968 by Willo von Moltke, director of the Urban Design Program at the GSD. I was to take part in a jury of a project under the direction of Giancarlo de Carlo, whom I knew already from my years at Yale.

I was completely astounded by the event which was different than anything I had ever experienced (here my comparison includes not only the GSD but Yale, where I had studied and begun teaching.) And this is why:

1. The project made no distinction between the individual building that the students were supposed to design and the urban surroundings. In fact, departing from the building, the students envisaged a complete reshaping of the urban fabric according to the principles centered in the building. These ideas were in the air in many places at that moment, but it was the first student project I experienced which carried them out with such coherence and single-mindedness.

2. The project was not a building. It was a series of "platforms and accesses" and these, not in the sense of Habraken's "supports," but, instead, much more an abstract, conceptual form of "design principles." The user was expected not only to finish up the project, filling in components, but to actually define it.

3. Without doubt there was a tremendous confusion in the discussion, a confusion that would not have been tolerated at Yale and Harvard. But there was a striking openness in the presentation of ideas, an unprecedented enthusiasm in the way individuals contributed to the dialogue, a feeling that something was being invented for the first time at that moment, something very important. The personality of De Carlo contributed to all this, but it was not only him. It was a spirit shared by faculty and students, and I will never forget the excitement of Hank Millon regarding the whole enteeprise.

Looking at this initial experience retrospectively, the question is how much of all this was unique to MIT, as compared to the spirit of the late '60s? My answer is that there are characteristics uniquely related to the institution, and not just to the times, and these are some of them:

1. As opposed to the doctrinaire orthodoxy of the CIAM-type modernism of the GSD, MIT saw modern architecture as a challenge of openness and invention. When Gropius was at Harvard, Wurster was at MIT. The best way to summarize the contrast between the two approaches is to look at the positions of these two figures at the MoMA conference entitled "What is Happening to Modern Architecture" (1948) organized by Lewis Mumford, another occasional MIT faculty member. Telling in this connection is that Alvar Aalto, another non-doctrinaire modern architect, was invited to build on the MIT campus his "irrational" spaces as they were characterized at the time by the GSD staff. Equally open were the formal experiments of Gyorgy Kepes and Tom McNulty.

2. The MIT openness did not only involve architecture as such. It concerned the blurring of the boundaries between building and urban fabric, a tradition that continued all the way to Habraken's work, the razing of the wall between "architecture" and "building" as well as "design" by the architect and "use" of the environment by the user, and last but not least confines between disciplines and faculties. A typical example here is Kevin Lynch, of course, but one could assemble a long list of names very easily from the rest of the faculty.

3. From the time of William Wurster, Kevin Lynch, Gyorgy Kepes and Rodwin, to that of Hank Millon, Maurice Smith, Nicholas Negroponte and Donald Schon, the process of design has been held in as much importance as the product.

4. Another aspect of MIT's spirit of openness and experimentation, linked with the preoccupation with the design process, is the advanced development of computation in design. Compared to the computer graphics laboratory of the GSD, the approach to computers at MIT was daring. One only has to recall the work of Negroponte in close collaboration with Yona Friedman, or Donald Schon's "reflective" rather than application-oriented attitude to computer-based design within the Athena project.

5. I would add, in this rambling sequence, a predominant commitment to moralism as opposed to professionalism.

Without doubt one could argue that these characteristics were not unique to MIT. Several of these ideas might even have originated at Harvard. To recall Robert Merton, however, what is of essence in institutional development is not the insemination of an idea but where it finds a nest in which to grow. The list of the creative innovators who departed from the GSD as opposed to those who remained in the faculty at MIT is striking: Meyerson, Alonzo, Chermayeff, Alexander who left the former versus, Lynch, Rodwin, Kepes, Negroponte, Schon who remained at the latter.

These unique qualities of MIT among others, made it a leading school of architecture and planning, if not the leading one, during the 1960s and 1970s. The story is very different looking at the 1980s. Once more the comparison with the GSD is striking. I believe we all know the facts and it is of no interest to enter into them at this point. What is more important is to reflect normatively about the future.

What is the future then? It would be disastrous to project a future for the next century out of the decade of crisis of the 1990s. It would be easy to condemn the postwar MIT tradition as responsible for the deprofessionalization of the school during the last decade. What would be harder to prove is that the antidote is a school which gives up its experimental, innovative, open spirit.

MIT's Department of Architecture of the 1960s and 1970s was successful because it managed to create a new program by redefining the positive aspects of the program of the late 1950s despite the superficial appearances of deep revolutionary discontinuities. Can this be repeated once more despite the fact that the changes are even more momentous now than then, extending to the new realities of the computer revolution, of professional practice, of new clients (global practice, reformed government) and of the ecological and economic crises? We have already written about the topicality of Lynch's research and the need to continue, expand and restate his work on cognitive mapping in the context of current developments in cognitive science, artificial intelligence and computational design. It is very tempting to point out other examples of such potential research programs at MIT which demonstrate continuity and re-thinking rather than deciding ex nihilo or simply importing ideas. Many could easily demonstrate the opposite.

MIT, like the GSD, the ETH of Zurich, the École Polytechnique in Paris, and the TUDelft, is a fascinating institution to study. But I believe it is judicious to stop here, for to go any further takes us into different areas of writing, not to mention different types of thinking, such as systematic analysis. This is a letter, and an already very long one. To conclude as I started, I believe studies concerning the future of organizations should be coupled with analysis of their origins and evolution. Staying with the tradition of "epistolography," I would like to wish you the best and hope that we will see each other again soon and have another opportunity to discuss research—and to ramble.

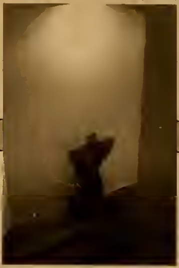
Best regards, on behalf of Liane too,

Alexander Tzonis

How much influence users can, in extreme cases, exert on their living or working environment is clearly demonstrated by the adjustments to the existing architecture that were made by students of architecture at MIT. . . the environment, if it still stands today, may be seen as a monument to the enthusiasm of a group of students of architecture. But we should not be surprised if everything is (or will soon be) cleared away—the bureaucracy of centralistic management is firmly back in control.
—Herman Hertzberger from *Lessons for Students of Architecture*, 1991.

Photos by Alan Barlis and Jim Rissling

Leers Weinzapfel Architects, *renovation of the office of the Dean of Architecture and Planning*, MIT (1993)



Ars Longa CAVS Brevis

"Centerbeam", *documenta 6*, Kassel, Germany (1977)

When I first arrived as a graduate student at the Center for Advanced Visual Studies (CAVS) in 1991, the program appeared to be foundering. The large collaborative projects and public celebrations for which it was once critically acclaimed were nowhere in evidence These projects ranged from multi-media operas to "Centerbeam" (1977), a 175 foot outdoor sculpture that included holograms, video, sound, steam, and laser light which was exhibited in *documenta 6* in Kassel, Germany, and reinstalled outside the Smithsonian museum in Washington the following year In the past, CAVS hosted an international roster of fellows and its reputation was strongly felt in art centers around the world where its institutional structure and philosophy was imitated CAVS's profile in Boston was rather more limited due to difficulties it encountered in having its work exhibited at the MFA and at MIT's own List Art Center More recently, CAVS's lack of funds and equipment has created an atmosphere of isolation and bitterness for the students and the fellows working there Meetings and seminars seem to dwell on events of the past rather than present projects or future possibilities When, after my first semester, I was informed that I was to be among CAVS's last graduate students, it hardly came as a surprise

In May 1992 it became apparent that MIT intended to close CAVS permanently, but in an indirect manner After the announcement that the Center's second director Otto Piene was to retire, the search to fill his tenured architecture professorship became instead a search for an artist to join the existing undergraduate program in the visual arts. The apparent reason for the change in recruiting priorities was a plan to establish a graduate course of study in the visual arts program. To many at CAVS, the change at first seemed logical Yet one might ask what would be lost by transferring the graduate program in art and technology from CAVS to the visual arts program in order to integrate the visual arts at MIT? The answer lies in the structure and goals of CAVS which are both historically and programmatically different from the visual arts program

CAVS was founded in 1968 by the Hungarian-born artist and book editor György Kepes, a former collaborator of Laszlo Moholy-Nagy at the Chicago School of Design (The Chicago School of Design was known as the American Bauhaus and continued many of the traditions and educational aims of its European predecessor) The goal of the new Center was to encourage collaboration between two ostensibly discreet fields—science/technology and art—with an eye to creating environments that fostered social progress through allied aesthetic and technological achievement. Under the direction of Kepes CAVS was a fellows research center where established practitioners in music, literature, visual arts, science and environmental design came to develop their own work and collaborate on large-scale projects.

In 1974 CAVS was taken over by one of its former fellows and later professor of visual design in architecture, Otto Piene The German-born Piene, whose sculpture innovated the use of large-scale inflatables, greatly augmented the Center's activities by initiating a graduate program which offered an opportunity for advanced students to work with artists and scientists Under Piene's direction the work at CAVS has varied from social criticism through media, as done by the fellow Muntadas, to performance work with "dancers and photons" by the students Shawn Brixley and Laura Knott, to some of the first holographic nudes by Harriet Casten-Silver

In 1984, at the same time the Architecture Machine Group was restructuring itself on a more independent basis under the direction of Nicholas Negroponte as the Media Lab, Piene was ordered by the provost and dean of the department of architecture to close CAVS The administrative directive cut the Center's operating budget in half and severely limited its right to raise outside funds, that is to say, the right to make its own future These funding limitations were subsequently reflected in the projects that were developed at CAVS. In 1990 the budget was again cut, and it was denied entirely the right to seek outside funding sources

Consequently, my brief experience at CAVS was one of limited resources and diminished expectations. I saw no collaborative projects, no new equipment, the picture I had of CAVS was of an antiquated, barely active place, a perception that seems currently widespread

As CAVS is slowly strangled by fiscal constraint, one might also ask whether its pedagogical goals are being determined by how commercially attractive its projects are to industry The importance of marketability is reflected in Dean Mitchell's proposal for "the studio of the future," and fully realized in the Media Lab, where research and its goals are clearly defined by their importance to industry With these market-driven priorities there is no place for critical thinking but only for further product development and refinement By contrast, CAVS's goals, like that of the Bauhaus to which it is genealogically linked, were self-defined and critically oriented even when funded by and carried out in collaboration with industry

In my opinion it would take two things to revitalize CAVS The first would be the appointment of a dynamic new director The second would be the resumption of active fund raising efforts. CAVS is not asking for indiscriminate support from the Institute It is, however, asking for the right to meet the programmatic and qualitative standards set by other programs at MIT while maintaining its own goals As an independent research center for fellows and graduate students in arts, science and technology, the structure of CAVS is unique and valuable to the MIT community The current trend towards quietly dismantling unprofitable research centers—such as CAVS and the Center for Materials Archeology—is a troubling indication of the Institute's attitude towards the development of alternative and critical intellectual goals.

by Margaret Orth

OTHER TRADITION (continued from p. 1)

congress Brussels) and opposed the idea of Planning by Functional Zones with his own advocacy of mixed-use planning.

Although he did write many forceful articles his criticism principally took the form of constructive action—buildings whose message spoke more vividly than any tract. For instance the designs proposed by both him and Scharoun for the Marl Town Hall competition offered a far more effective resistance to the "dictatorship" of the sub-Miesian glass box than any other course of action.)

Finally, and more damning than any other evidence, Time has demonstrated that the "alternative" designs have turned out to "work" better by far than the orthodoxies they opposed. I take for example Aalto's Baker House, firstly because it exposes the triviality of the argument behind "the International Style" and secondly, because it brings us back to MIT and Aalto's relation to the Harvard of Gropius by virtue of comparison with the (contemporary) Harvard Graduate Center.

That comparison says it all. The requirements for both projects were similar (accommodation for students in single and shared rooms) as were the constraints of strict economy, and both buildings were the occasion for exploration as studio projects. There all similarity ends. For Gropius' adherence to a grindingly pragmatic brief culled from three sets of University Estate sources is presented to the students as a down-to-earth introduction to the "real world of practice," but no incentive was given to challenge the "values" of that world of accountancy; economy (the "*Existenzminimum*" once more) is the sole value. Thus the ratio of single to double rooms is determined in favor of the latter on economic grounds without any attempt to seek student preference through survey (so much for the pious talk of social values, democracy, etc.) and the genial suggestion that some lounges might be introduced was promptly defused by the suggested location "in the basement!"

By contrast we see that Aalto, fully accepting the constraint of economy, nevertheless engages it as part of a complex equation that gives equal value to privacy, views of the Charles River, relationship to traffic on Memorial Drive and sunlight to each room. And so, within the limits of frontage determined by the site, a dozen anatomies are produced and compared on a score-card basis. Note that, at the very least, this approach encourages the accountants to see that there are other values than money. Note also that it dismisses once and for all the blind spot of the style-minders who saw the building as an example of "eccentric expressionism" (Hitchcock) or "the irrational" (Giedeon). Nothing could be more deeply ordered or rational than this building.

In the second place Aalto's philosophy of the building as a way-of-life with "man at the center" led him to the very demanding conclusion that "it is not what a building looks like on the opening day but what it is like thirty years later that counts." Not one of the other Masters had either concerned themselves with such a criterion or dared to throw down such a hostage to fortune. The fact is that a feed-back review of buildings is an extremely rare phenomenon. In the case of Baker House however we have precisely that, an extended review carried out thirty years after the opening of the building.[2]

The findings of that review are quite remarkable. It explored "the effectiveness of Aalto's simultaneous concerns for the particular needs of the individual inhabitant and for the support necessary to develop a group living experience. ... If the design was that of a Master the result has been active participation."

Three factors in particular were identified as contributory to the sustained popularity of the building among successive generations of residents. Firstly the individual rooms. Privacy, view to the Charles River and orientation to sunlight are provided to rooms whose variation in shape and size have stimulated a rich framework for improvised participation by the inhabitants in rooms ranging from one to three persons and ranging even more widely in shape. The shared elements—three lounges on each floor, dining hall, recreation area and the monumental stairway have created a sense of place and community that is unique for the whole campus. "The central stair provides easy communication between floors and may contribute to room assignment priorities. Together with the floor lounges it provides a tree of communication, meeting and circulation spaces along the north side of the building as a complement to the private and semi-private rooms along the south face."

The review also underlines the importance of the shared lounges by recording that whereas, during the 'sixties, the authorities substituted student rooms for the central lounges (in order to increase student accommodation and thereby reduce the rent) the Student House Committee were then demanding reversion to the original layout. Aalto, evidently, had got it right in the beginning.

Finally if we introduce into the equation that factor to which Herdeg ascribes so much importance, the presence in a building of metaphorical or symbolic analogies, we find that, where the Harvard Center seems to repeat "a box is a box is a box" Baker House recalls in the monumental staircase the image of a great climbing vine while the sinuous curve of the south frontage recalls the undulation of the river itself to the West before it runs past the building on its way to the sea.

In his famous telegram to Dean Burchard at MIT in 1958 Aalto wrote "... the enemy number one today is modern formalism ... True architecture the real thing is only where man stands in center." That had some of the touch of Nelson's famous signal at the Battle of Trafalgar. I believe it would be no mean thing if MIT, as of right, drank a toast once a year to "The Immortal Memory" of Alvar. ■

1. Klaus Herdeg, The Decorated Diagram. Harvard Architecture and the Failure of the Bauhaus Legacy (Cambridge, Massachusetts: MIT Press 1983)
2. Deborah Poodry and Victoria Ozonoff, "Coffins, Pies & Couches: Aalto at MIT," Space and Society 18 (June 1982)

Colin St John Wilson (Bemis Professor at MIT 1970–72) is writing on "The Other Tradition" which was the subject of his lecture at MIT in March. A reprint of his Architectural Reflections is available for $24.95.

Alvar Aalto, developmental design sketches, *Baker House* (1946–47)

IMMEDIATE PAST *(continued from p. 3)*

be used as a paperweight. In the context of a boring class, the desk calculator becomes a communicator: by typing .01134 and turning it upside down a student can send a silent hello to a co-conspirator. I am not suggesting that the desktop calculator is a more effective communication tool than a powerbook with a cellular modem. My point is that the "nonprogrammed" functionality of a system or a space—the possibilities revealed to bricolage or hacking, if you like—can often become the essential functionality, and that by definition this functionality is excluded from the virtual version of the system/space. On the other hand I should point out that the virtual version will find its own nonprogrammed uses, its own hacks, which brings us to the final point of my argument.

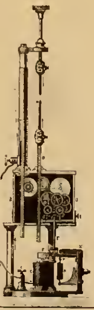
So far I have merely suggested that virtual calculators, studios, realities and their real counterparts will never match up or adequate function-for-function, because of ongoing contextual slippage on both sides and ineradicable programmatic lacunae. I have only claimed that the virtual studio is different than the real studio. Though there will be slight differences between the virtual and the real studio, if all we lose by abandoning the real studio for the virtual is the equivalent of the ability to write hello on a calculator, then why not?

Functional decompositions of simple interactions such as the financial transactions that took place at bank teller windows can in fact be very successful, as Mitchell and many other satisfied cash machine customers have noted. But in more complex systems of interaction (such as cities, minds, or desk crits) *a priori* specifications of functional interactions becomes much more difficult to describe. Christopher Alexander, one of the first to use computers for architectural/urban analysis, realized the limitations of functional "tree" diagrams. This is because for the system to operate at all its specified elements must be allowed to become unstable, shifting in order to organize into larger aggregates, and play multiple roles. The city of Brasilia is an example of an effort to form a functional decomposition of a city. Functional decomposition of the mind gave us expert systems (and if computer programs were cities, an expert system would look like Brasilia) plus many less useful AI programs. A functionalist approach to human interaction, represented by a virtual studio in which all business will be carried out online (and here the voice is indeed imperative), would lead to a similarly bleak outcome.

I am not suggesting that architects retreat behind a veil of technophobia or ignore technology and let the programmers build the information spaces and set the social agendas. Architects must intervene and ask the question concerning technology, rather than passively accepting the "Wonder Stories" once peddled by Hugo Gernsback and now by AT&T and MIT. We must consider the possibility that, in Michael Harrington's words, "we are living through a 'slow apocalypse,' a transition to a new civilization that could occur before we are even aware of it. If that revolution, which is in progress, makes us, we will lose ourselves; if we make it, there is at least hope for freedom and justice and solidarity." Though I am critical of the gleaming Gernsbackian future on offer in *Plan*, I believe that many of Mitchell's predictions will come to pass. If the capital of the 21st century does turn out to be the network, as he suggested in a recent issue of *ANY*, then socially responsible architects have a duty to explore technology and to try to influence the shape of the studios and other cultural spaces being reconfigured now. The question is not whether the future will come but what form it will take. ■

References

Joseph Corn and Brian Horrigan, Yesterday's Tomorrows: Past Visions of the American Future (Simon & Schuster, 1984)
William Gibson, "The Gernsback Continuum," in Bruce Sterling, ed., Mirrorshades (Arbor Press, 1986)
Michael Harrington, "Socialism, Past and Future," quoted in Pam Rosenthal, "Jacked In: Fordism, Cyberpunk, Marxism," Socialist Review 1 (1991)
William Mitchell, "The Electronic Agora," in ANY 3 (1993)
Nicholas Negroponte, "The Architecture Machine," (Amo, 1970)
"Studios of the Future Under Construction at MIT," Plan (Fall 1993)



It Is What HTC Demands:

The Foucault Regulator
(*Appleton's Cyclopedia*, 1880, 1:545)